

REMARKS

Claims 17 and 20 have been rewritten in independent form and are otherwise the same claims 17 and 20 that was originally filed.

The Examiner rejected claims 1-20 under 35 U.S.C. §101.

The Examiner rejected claims 1, 2, 5, 6, 8, 9, 12, 13, 15-17, 19 and 20 under 35 U.S.C. §102(b) as allegedly being anticipated by Andrew E. Ayers (U.S. Patent No. 5,857,105, and referred to as Ayers hereinafter).

The Examiner rejected claims 3, 7, 10, 14 and 18 under 35 U.S.C. §103(a) as allegedly being unpatentable over Ayers, and in view of Seema Hiranandani (U.S. Patent No. 5,812,855 and referred to as Hiranandani hereinafter).

The Examiner rejected claims 4 and 11 under 305 U.S.C. §103(a) as allegedly being unpatentable over Ayers, and in view of Seema Hiranandani, and further in view of Uma Mahadevan (U.S. Patent No. 5,797,013 and referred to as Mahadevan hereinafter).

Applicants respectfully traverse the §101, §102(b) and §103(a) rejections with the following arguments.

35 U.S.C. §101

The Examiner rejected claims 1-20 under 35 U.S.C. §101 allegedly "because the claimed invention lacks patentable utility. Specifically, *claims 1, 7, 8, 14, 15 and 18 drawn to a method for optimizing computer software. The Examiner submits that Applicant's have not recited any limitations relating to a practical application in the technological arts. (See MPEP 2106)....* The examiner respectfully submits, under current PTO practice, the claimed invention can be done by hand, analyzing, identifying, recording, scanning, and modifying through handdrawing a flow chart."

In response, Applicants respectfully contend that since claims 16 and 19 have been cancelled, the rejection of claims 16 and 19 under 35 U.S.C. §101 is moot.

Also in response, Applicants have amended independent claims 1, 7, 8, 14, 15, and 18 such that the recited method steps and means are computer implemented and not hand implemented, which overcomes the rejection based on the Examiner's allegation that "the claimed invention can be done by hand". Therefore, Applicants respectfully request that the rejection of claims 1-15 and 18 under 35 U.S.C. §101 be withdrawn.

Additionally in response, claims 17 and 20 cannot be done by hand, because claims 17 and 20 includes the limitation: "implemented in the form of a body of computer code made available for downloading from a computer connected to a computer network". Accordingly, Applicants respectfully contend that the rejection of claims 17 and 20 under 35 U.S.C. §101 is improper and should be withdrawn.

35 U.S.C. §102(e)

The Examiner rejected claims 1, 2, 5, 6, 8, 9, 12, 13, 15-17, 19 and 20 under 35 U.S.C. §102(b) as allegedly being anticipated by Andrew E. Ayers (U.S. Patent No. 5,857,105, and referred to as Ayers hereinafter).

Applicants respectfully contend that since claims 16 and 19-20 have been cancelled, the rejection of claims 16 and 19-20 under 35 U.S.C. §102(b) is moot.

Claims 1, 2, 5, 6, 8, 9, 12, 13, and 15

Applicants respectfully contend that Ayers does not anticipate claims 1, 8, and 15, because Ayers does not teach each and every feature of claims 1, 8, and 15. For example, Ayers does not teach the feature: "the callable procedure comprising a branch condition under which control flow code directs program flow from the branch condition to a code branch of two or more code branches, each said code branch being within the callable procedure and branching from the branch condition to program code within the callable procedure".

The Examiner alleges that Ayer's callee routine represents the callable procedure of claims 1, 8, and 15. In Ayers, FIG. 2, the routines T, U, and V are examples of such callee routines. Applicants contend that Ayers does not disclose that the callee routines satisfy the preceding feature of claims 1, 8, and 15.

For example, the callee routines do not comprise a branch condition as required by claims 1, 8, and 15. In fact, Ayers does not disclose what program code is comprised by the callee routine other than the capability of being called. Ayers most certainly does not disclose that the callee routine comprises a branch condition.

In addition, the code branches in Ayers are branches from the caller routine to the callee routine are therefore not contained within the callee routine as required by claims 1, 8, and 15. See, e.g., code branches (1), (2), and (3) in Ayers, FIG. 2 from caller routine Z to callee routines T, U, and V, respectively.

Moreover, Ayers does not teach that the callee routine comprises "a branch condition under which control flow code directs program flow from the branch condition to a code branch of two or more code branches". For example in FIG. 2 of Ayers, the caller routine Z has control flow code for directing program flow to the code branches (1), (2), and (3). The callee routines T, U, and V are merely being called by the caller routine Z. Since the program flow is to the callee routine, and not from the callee routine, the callee routine does not and cannot direct program flow to the code branches (1), (2), and (3).

Based on the preceding arguments, Applicants respectfully maintain that Ayers does not anticipate claims 1, 8, and 15, and that claims 1, 8, and 15 are in condition for allowance. Since claims 2, 5, and 6 depend from claim 1, Applicants contend that claims 2, 5 and 6 are likewise in condition for allowance. Since claims 9, 12 and 13 depend from claim 8, Applicants contend that claims 9, 12 and 13 are likewise in condition for allowance.

Claim 17

Applicants respectfully contend that Ayers does not anticipate claim 17, because Ayers does not teach each and every feature of claim 17. For example, Ayers does not teach the feature: "a procedure which is callable by the or each call statement and which has two or more code branches and control flow code for directing program flow to the code branches".

The Examiner alleges that Ayer's callee routine represents the callable procedure of claim 17. In Ayers, FIG. 2, the routines T, U, and V are examples of such callee routines. Applicants contend that Ayers does not disclose that the callee routines satisfy the preceding feature of claim 17.

For example, Ayers does not disclose that the callee routine has two or more code branches as required by claim 17. For example, the code branches in Ayers are branches from the caller routine to the callee routine. Thus, it is the caller routine and not the callee routine that has the code branches. See, e.g., code branches (1), (2), and (3) in Ayers, FIG. 2 from caller routine Z to callee routines T, U, and V, respectively.

Moreover, Ayers does not teach that the callee routine has control flow code for directing program flow to the code branches. For example in FIG. 2 of Ayers, the caller routine Z has control flow code for directing program flow to the code branches (1), (2), and (3). The callee routines T, U, and V are merely being called by the caller routine Z. Since the program flow is to the callee routine, and not from the callee routine, the callee routine does not and cannot direct program flow to the code branches (1), (2), and (3).

Based on the preceding arguments, Applicants respectfully maintain that Ayers does not anticipate claim 17 and that claim 17 is in condition for allowance

Claim 20

Independent claim 18 was not rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Ayers.

In fact, the Examiner admits that Ayers does not teach the following feature of claim 18:

“for each branching node, two or more further nodes representing respective code branches to which program flow is directed by the branching node”. Therefore, claim 18 is not anticipated by Ayers.

Likewise, claim 20 which depends from claim 18 (and which also includes the preceding feature of claim 18 which the Examiner admits that Ayers does not teach) is not anticipated by Ayers and is in condition for allowance.

35 U.S.C. §103(a): Claims 3, 7, 10, 14 and 18

The Examiner rejected claims 3, 7, 10, 14 and 18 under 35 U.S.C. §103(a) as allegedly being unpatentable over Ayers, and in view of Secma Hiranandani (U.S. Patent No. 5,812,855 and referred to as Hiranandani hereinafter).

Claims 3 and 10

Since claim 3 depends from claim 1, which Applicants have argued *supra* to not be unpatentable over Ayers under 35 U.S.C. §102(b), Applicants maintain that claim 3 is likewise not unpatentable over Ayers in view of Hiranandani under 35 U.S.C. §103(a).

Since claim 10 depends from claim 8, which Applicants have argued *supra* to not be unpatentable over Ayers under 35 U.S.C. §102(b), Applicants maintain that claim 10 is likewise not unpatentable over Ayers in view of Hiranandani under 35 U.S.C. §103(a).

Claims 7, 14, and 18

Applicants respectfully contend that claims 7, 14, and 18 are not unpatentable over Ayers and in view of Hiranandani, because Ayers and in view of Hiranandani does not teach or suggest each and every feature of claims 7, 14, and 18. For example, Ayers and in view of Hiranandani does not teach or suggest the feature: "wherein said one or more branching nodes and said respective code branches are contained within the callable procedure".

The Examiner alleges that Ayer's callee routine represents the callable procedure of claims 7, 14, and 18. In Ayers, FIG. 2, the routines T, U, and V are examples of such callee routines. Applicants contend that Ayers does not disclose that the callee routines satisfy the

preceding feature of claims 7, 14, and 18.

For example, the branching node in Ayers is the caller routine which is not contained within the callee routine as required by claims 7, 14, and 18. Furthermore, the code branches in Ayers are branches from the caller routine to the callee routine and therefore not contained within the callee routine as required by claims 7, 14, and 18. See, e.g., code branches (1), (2), and (3) in Ayers, FIG. 2 from caller routine Z to callee routines T, U, and V, respectively.

In addition, Ayers does not teach the feature: "considering each node in turn and, if the node being considered is a branching node and if the branching condition for that node by which the respective control flow code directs program flow to the respective code branches is able to be represented as a function only of **formal parameters and global variables**, identifying a new procedure for which the flow control graph comprises all the nodes in the path from the first node of the procedure to the node being considered, the node being considered, and the whole of the portion of the control flow graph led to directly or indirectly from the node being considered" (emphasis added).

The Examiner argues that the preceding feature relating to "formal parameters" is disclosed by the reference to "signature" in Akers, col. 5, line 21. In response, Applicants contend that Ayers does not disclose that the "signature" is a formal parameter. The Examiner's citation has no relevance to "formal parameters" as used by a person of ordinary skill in the art of computer programming and as conventionally used in a large variety of computer software languages.

The Examiner argues that the preceding feature relating to "global variables" is disclosed in Ayers, FIG. 2. In response, Applicants contend that FIG. 2 does not disclose the existence of

global variables. The Examiner's citation has no relevance to "global variables" as used by a person of ordinary skill in the art of computer programming and as conventionally used in a large variety of computer software languages.

Applicants respectfully note that the Examiner's citations in relation to become familiar with the meaning of "formal parameters" and "global variables" as is in the art of computer programming.

Based on the preceding arguments, Applicants respectfully maintain that claims 7, 14, and 18 are not unpatentable over Ayers and in view of Hiranandani, and that claims 7, 14, and 18 are in condition for allowance.

35 U.S.C. §103(a): Claims 4 and 11

The Examiner rejected claims 4 and 11 under 305 U.S.C. §103(a) as allegedly being unpatentable over Ayers, and in view of Seema Hiranandani, and further in view of Uma Mahadevan (U.S. Patent No. 5,797,013 and referred to as Mahadevan hereinafter).

Since claim 4 depends from claim 1, which Applicants have argued *supra* to not be unpatentable over Ayers under 35 U.S.C. §102(b), Applicants maintain that claim 4 is likewise not unpatentable over Ayers in view of Hiranandani and further in view of Mahadevan under 35 U.S.C. §103(a).

Since claim 1 depends from claim 8, which Applicants have argued *supra* to not be unpatentable over Ayers under 35 U.S.C. §102(b), Applicants maintain that claim 11 is likewise not unpatentable over Ayers in view of Hiranandani and further in view of Mahadevan under 35 U.S.C. §103(a).

CONCLUSION

Based on the preceding arguments, Applicants respectfully believe that all pending claims and the entire application meet the acceptance criteria for allowance and therefore request favorable action. If the Examiner believes that anything further would be helpful to place the application in better condition for allowance, Applicants invites the Examiner to contact Applicants' representative at the telephone number listed below. The Director is hereby authorized to charge and/or credit Deposit Account No. 09-0457.

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24